



# CITY OF FORT PIERCE COMMUNITY DEVELOPMENT DEPARTMENT PLANNING DIVISION

*COMPREHENSIVE PLANNING ◊ DEVELOPMENT REVIEW  
HISTORIC PRESERVATION ◊ URBAN DESIGN ◊ URBAN FORESTRY ◊ ZONING*

## CAPACITY ANALYSIS

### I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Vacant	RM	R4
South	Recreation	INST	OS1
East	Residential	RM	PUD
West	Hospital/Medical	Office INST/OP	C1

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	Medium Residential	PUD	220 (13.86)	15.87	X
**Proposed	Medium Residential	PUD	266 (16.76)	15.87	N/A X

### II. Public Facilities Information:

A. Potable Water:	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day 57,200
**Proposed Zoning/FLU	Total gallons per day 69,160
**Change in Demand	Total gallons per day 11,960

<b>B. Wastewater:</b>	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day 57,200
**Proposed Zoning/FLU	Total gallons per day 69,160
**Change in Demand	Total gallons per day 11,960

<b>C. Parks and Recreation (Residential Classifications Only):</b> (Du x 2.6 = persons + 44,227 = population /LOS)				
Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	572	692	+ 120
Urban District	5 acres per 1,000 people	572	692	+ 120
Community	2.5 acres per 1,000 people	572	692	+ 120
Neighborhood	1.36 acres per 1,000 people	572	692	+ 120

<b>D. Public Schools (Residential Classifications Only):</b> Single Family: (du x 0.405 = students/70% K-8/30% High) Multi-family: (du x 0.207 = students/70% K-8/30% High)		
	K-8	High
School Name		
City	Ft. Pierce	Ft. Pierce
Distance		
Current Zoning/FLU Enrollment Demand	62	27
**Proposed Zoning/FLU Enrollment Demand	75	32
**Change in Demand	13	6

<b>E. Solid Waste:</b> 2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units	
Demand Analysis	Maximum
Current Zoning/FLU	29 yards
**Proposed Zoning/FLU	35 yards
*Change in Demand	6 yards

<b>F. Stormwater:</b>
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

No change in the impervious area.

<b>Impact</b>	
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**III. Transportation Analysis: Complete ITE Trip Generation Form (Attached)**

<b>G. Transportation Analysis: Complete ITE Trip Generation Data Form</b>		
Most recent ITE Code for use; HCM Roadway Capacity		
	<b>AADT</b>	<b>AM/PM Peak Hour Trips</b>
<b>Demand Analysis</b>	Maximum	Maximum
<b>Current Zoning/FLU</b>	1463	136/112
<b>**Proposed Zoning/FLU</b>	1769	165/136
<b>*Change in Demand Impact to Capacity</b>	Trips 306	Trips 29/23

**IV. Project Description**

<b>PHASING</b>
Is this project (phase) part of a larger project? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.
Total Project: Residential Units: 266      Single Family:      Multifamily: 266
Non-residential (square footage):      N/A
Mixed-use (describe use):      N/A
(If this is a single phase project, name it Phase I – Total)

<b>RESIDENTIAL DATA</b>					
<b>Type</b>	<b>Phase</b>	<b>Number of Units</b>	<b>Acres</b>	<b>Expected beginning date</b>	<b>Expected completion date</b>
Single-family, detached					
Single-family, attached					
Multi-family	1	266	15.87	1st qtr. 2016	2018
Other (specify)					

<b>NON-RESIDENTIAL DATA</b>					
<b>Type(s) specify</b>	<b>Phase</b>	<b>Square footage</b>	<b>Acres</b>	<b>Expecting beginning date</b>	<b>Expected completion date</b>
N/A					

A. Indicate whether the proposed project will be eliminating any existing recreational facilities. If yes, detail the number and type being eliminated.  Yes  No

- B. 1. Does this application involve demolition or re-use of any structure(s)?  Yes  No  
If yes, what is the size of the structure(s) to be demolished or re-used? \_\_\_\_\_
2. What is the current use of the structure to be demolished or re-used? N/A
3. Are you claiming trip credits for the demolition or re-use of a structure(s) at the site?  Yes  No  
If yes, provide estimates of credits for each previous use at the site. (Attach sheet with calculations)

C. Exemptions Requested:

\*\* Complete section if requesting a change in zoning, future land use, or expanding

PROVIDING FOR A DENSITY OF 17 DU/AC.

TRAFFIC IMPACT STUDY

**MAYFAIR AT LAWNWOOD  
FORT PIERCE, FLORIDA**



Prepared for:

IBI Group (Florida), Inc.  
2200 Park Central Boulevard North  
Suite 100  
Pompano Beach, Florida 33064

Prepared by:

Traffic Planning and Design, Inc.  
535 Versailles Drive  
Maitland, Florida 32751  
407-628-9955

November 2015  
TPD № 4714

## PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with Traffic Planning & Design, Inc., a corporation authorized to operate as an engineering business, EB-3702, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

**PROJECT:** Mayfair at Lawnwood  
**LOCATION:** Fort Pierce, Florida  
**CLIENT:** IBI Group (Florida), Inc.

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.

**NAME:** Turgut Dervish, P.E.  
**Florida P.E.:** 20400  
**DATE:** November 16, 2015  
**SIGNATURE:** \_\_\_\_\_



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## INTRODUCTION

This traffic analysis was conducted in order to assess the traffic impact of Mayfair, a proposed 266-unit multi-family residential project in the City of Fort Pierce, Florida. The project site is located on Nebraska Avenue between North Lawnwood Circle and Quincy Avenue. **Figure 1** depicts the site location and the area road roadways. Access to the site will be provided via driveways from North Lawnwood Circle, Nebraska Avenue and South Lawnwood Circle. **Figure 2** is a preliminary site plan depicting the project's building layout and its access configuration. Based on this plan, 52 units in four buildings will be accessed from North Lawnwood Circle, 94 units in nine buildings from Nebraska Avenue and 120 units in ten buildings from South Lawnwood Circle.

The analysis was performed in accordance with the *St. Lucie TPO Standardized Traffic Impact Studies (TIS) Methodology and Procedures*, dated January 23, 2014. Data utilized in the analysis consists of site plan development information provided by the Project Engineers, traffic counts and Level of Service standards/capacities obtained from St. Lucie MPO, and trip generation rates from the Institute of Transportation Engineers (ITE). Additionally, the TPD personnel conducted field surveys/observations of the area roadways and collected P.M. peak hour intersection counts.

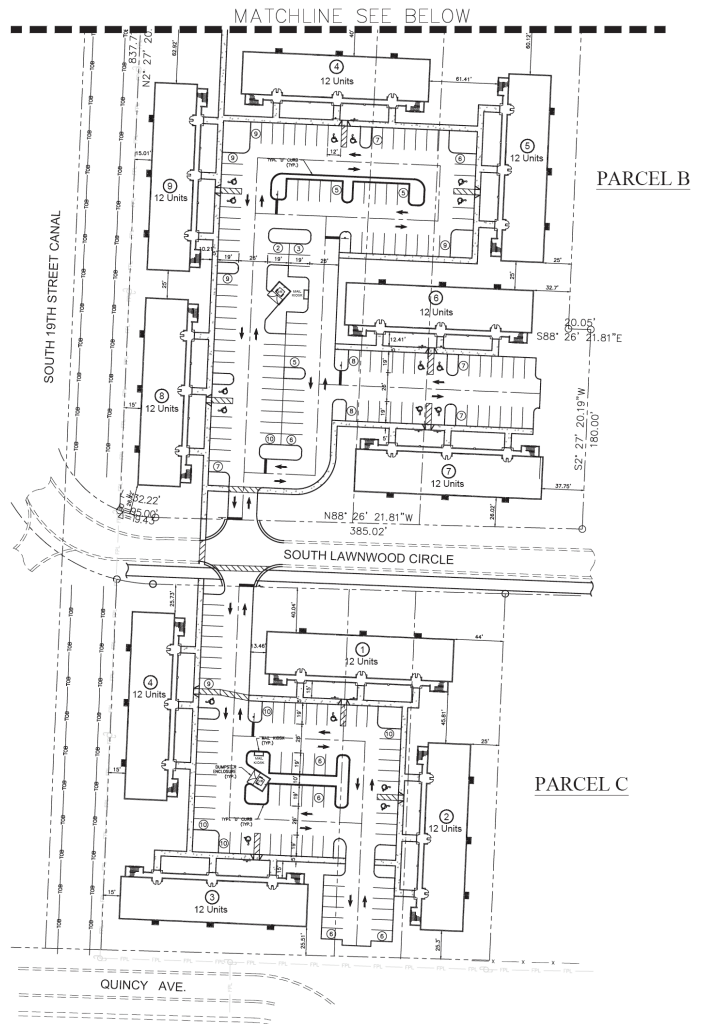
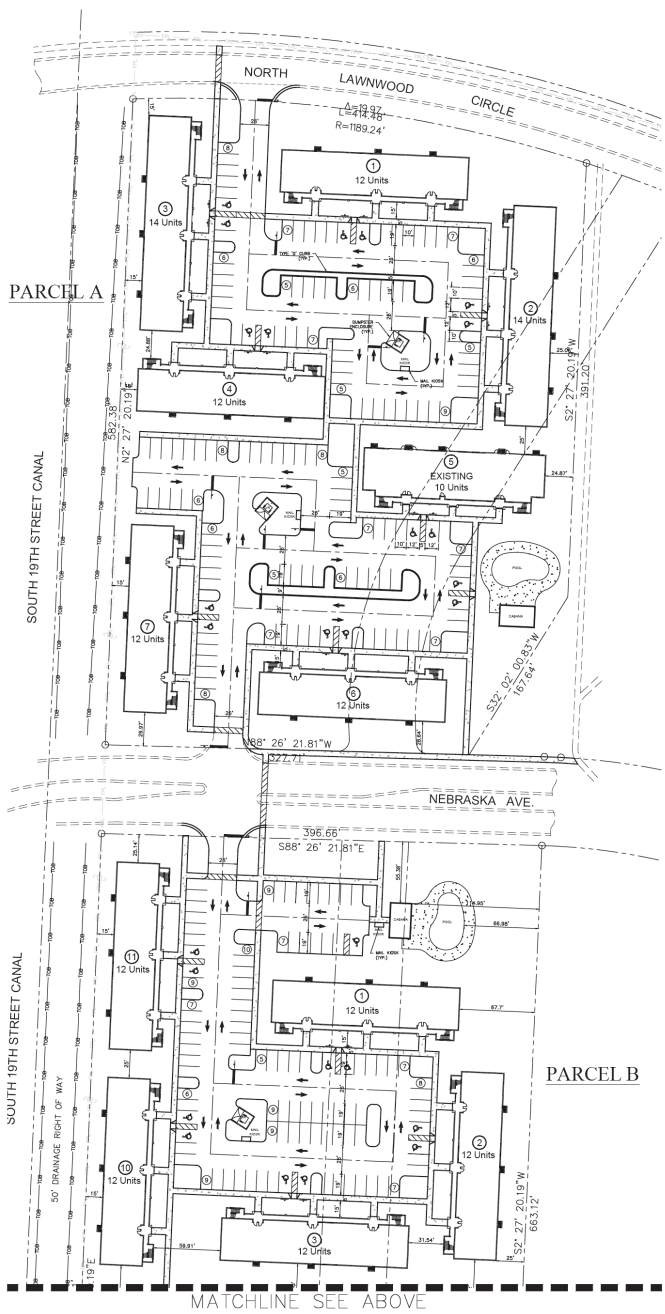




Mayfair at Lawnwood Planned Development  
 Project № 4714  
 Figure 1

**Site Location**





Mayfair at Lawnwood Planned Development  
Project No 4714

Figure 2

**Preliminary Site Plan**



## PROPOSED DEVELOPMENT AND TRIP GENERATION

The proposed development is a 266-unit multi-family residential project. To determine the traffic impact of this development in the area, an analysis of its trip generation characteristics was made. This included the estimation of the trips to be generated and their distribution/assignment to the area roadways.

### Trip Generation

The trip generation of the proposed development was calculated with the use of trip generation rates from the *9<sup>th</sup> Edition of the ITE Trip Generation Manual*. This calculation is summarized in **Table 1** which shows the development's daily and P.M. peak hour trips to be generated. As can be seen, the proposed development is expected to generate 1,769 daily trips and 165 P.M. peak hour trips.

**Table 1**  
**Trip Generation Calculation**

ITE Code	Land Use	Size	Daily Trips		P.M. Peak Hour Generation			
			Rate	Trips	Rate	Enter	Exit	Total
220	Apartment	266 DU	6.65	1,769	0.62	107	58	165
Total Trips				1,769		107	58	165

### Trip Distribution/Assignment

The trip distribution of the generated trips in the area were estimated from review of the existing P.M. peak hour counts made at the intersections at the two ends of Nebraska Avenue. Nebraska Avenue is a four lane divided roadway which extends from 13<sup>th</sup> Street on east and to 25<sup>th</sup> Street (Martin Luther King Jr. Boulevard) on the west. It is the area's major roadway providing external access to developments along Lawnwood Circle and Nebraska Avenue.

The distribution pattern determined based upon the existing P.M. peak hour counts is illustrated in **Figure 3**. This figure also shows the project's daily and P.M. peak hour trips assigned to the area roadways based upon this distribution.





Mayfair at Lawnwood Planned Development  
Project № 4714

Figure 3

### Trip Distribution / Assignment



### Project Significance/Impact Area

The extent of the project's impact area and the roadways/intersections to be included in the analysis were based upon St. Lucie MPO's one percent or five percent significance threshold established in the TIS Methodology and Procedures. According to these procedures the roadways and intersections which meet one of the five criteria below are to be included in the analysis:

1. Any road segment to which development traffic makes its connection to the Major Road Network, provided that the development traffic consumes one percent or more of the existing or committed two-way peak hour service capacity.
2. Major Road Segment on which the two-way peak hour project traffic consumes 5 (five) percent or more of the existing or committed two-way peak hour capacity.
3. Site driveway connections to public roads.
4. Intersections of local/non-major roads (that provide access to the development) with the Major Road Network.
5. Major intersections that are part of the impacted roadways.

**Table 2** is a summary of the significance test, which shows that Nebraska Avenue and Lawnwood Circle meet the minimum 1.0% significance threshold. Therefore these roadways along with the following intersections will be numbered in the traffic analysis:

- Nebraska Avenue & 25<sup>th</sup> Street
- Nebraska Avenue & Lawnwood Circle
- Nebraska Avenue & 13<sup>th</sup> Street
- Site Driveway Connections



**Table 2  
Project Trip Significance**

<b>Roadway Segment</b>	<b>No. of Lanes</b>	<b>LOS Standard</b>	<b>Two-Way Peak Hour Service Capacity</b>	<b>Distribution</b>	<b>Project Trips</b>	<b>Project Significance</b>
<b>North Lawnwood Circle</b>						
Nebraska Avenue to Project Site	2	D	1,200	20%	33	2.8
<b>South Lawnwood Circle</b>						
Nebraska Avenue to Project Site	2	D	1,200	45%	74	6.2
<b>Nebraska Avenue</b>						
25th Street to Lawnwood Circle	4	D	2,920	50%	83	2.8
Lawnwood Circle to 13th Street	4	D	2,920	50%	83	2.8
<b>13<sup>th</sup> Street</b>						
Virginia Avenue to Nebraska Avenue	2	D	1,170	30%	50	4.3
Nebraska Avenue to Georgia Avenue	2	D	1,260	20%	33	2.6
<b>25<sup>th</sup> Street</b>						
Virginia Avenue to Nebraska Avenue	4	D	3,580	25%	41	1.1
Nebraska Avenue to Okeechobee Road	4	D	3,580	25%	41	1.1



## EXISTING CONDITIONS ANALYSIS

An analysis of the P.M. peak hour traffic conditions at the study roadways and intersections was conducted to establish their current operating conditions. This included the determination of the existing Levels of Service (LOS) for the roadway segments and vehicle delays at the intersection approaches along with the corresponding LOS.

### Roadway Segment Analysis

The study roadway segments were analyzed by comparing their existing traffic volumes with their respective capacities at the adopted LOS standard. The P.M. peak hour volumes along the roadway segments were taken St. Lucie MPO's traffic counts and Level of Service Reports, Fall 2014. A summary of the P.M. peak hour roadway capacity analysis is presented in **Table 3** which shows that the roadways to be impacted by the proposed development currently operate at satisfactory Levels of Service.

**Table 3  
Existing Roadway Capacity Analysis**

Roadway Segment	No. of Lanes	Adopted		Peak Direction	PHPD Volume	Existing LOS
		LOS	Capacity			
<b>North Lawnwood Circle</b>						
Nebraska Ave to Project Site	2	D	675	SB	74	C
<b>South Lawnwood Circle</b>						
Nebraska Ave to Project Site	2	D	675	NB	28	C
<b>Nebraska Avenue</b>						
25 <sup>th</sup> St to Lawnwood Cir	4	D	1,710	WB	201	C
Lawnwood Cir to 13 <sup>th</sup> St	4	D	1,710	EB	201	C
<b>13<sup>th</sup> Street</b>						
Virginia Ave to Nebraska Ave	2	D	710	SB	367	D
Nebraska Ave to Georgia Ave	2	D	790	SB	367	D
<b>25<sup>th</sup> Street</b>						
Virginia Ave to Nebraska Ave	4	D	2,000	SB	1,110	C
Nebraska Ave to Okeechobee Rd	4	D	2,000	SB	1,110	C



## Intersection Analysis

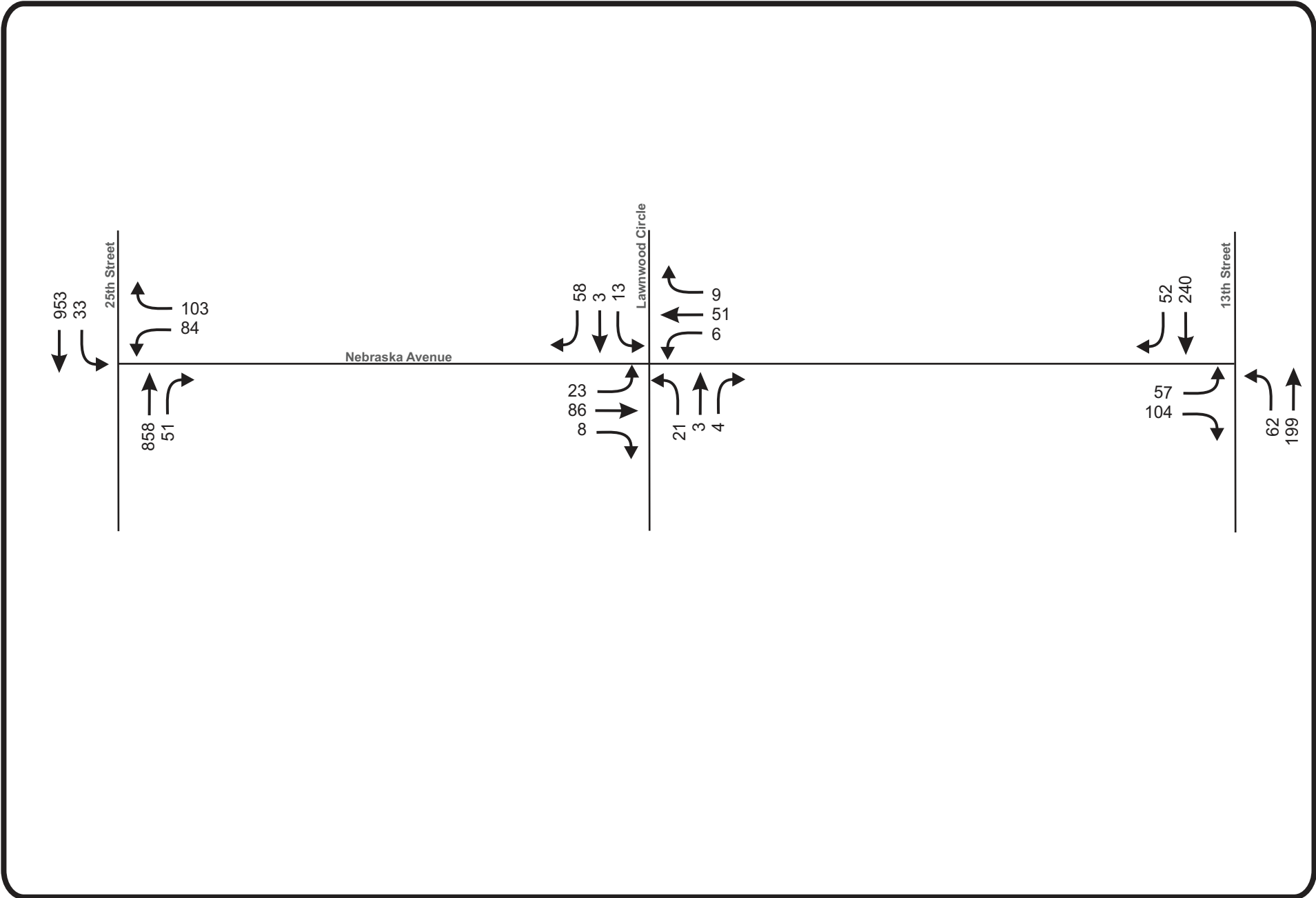
The intersection analysis was conducted in accordance with the procedures of the *2010 Highway Capacity Manual* (HCM) utilizing Highway Capacity Software (HCS) for signalized/unsignalized intersections. In the analysis, existing intersection geometry, peak hour volumes and signal timing/phasing data were used as inputs. The two-hour P.M. peak hour intersection counts made by 15-minute intervals along with signal timing data obtained in the field are included in **Appendix A**. The P.M. peak hour traffic counts, seasonally adjusted as per FDOT's Peak Season Factor Category Report, and used in the analysis are summarized in **Figure 4**.

The results of the intersection capacity analysis for the intersections are summarized in **Table 4** and detailed capacity analysis worksheets are included in **Appendix B**. The capacity analysis results indicate that the study intersections and their approaches currently operate at satisfactory Levels of Service.

**Table 4**  
**Existing Intersection Capacity Analysis**

Intersection	Control	Period	EB		WB		NB		SB		Overall	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Nebraska Avenue & 25 <sup>th</sup> Street	STOP	P.M.	----	----	21.9	C	----	----	10.5	B	----	----
Nebraska Avenue & Lawnwood Avenue	STOP	P.M.	7.4	A	7.4	A	10.1	B	9.1	A	----	----
Nebraska Avenue & 13 <sup>th</sup> Street	Signal	P.M.	19.3	B	----	----	3.7	A	6.7	A	8.5	A





Mayfair at Lawnwood Planned Development  
 Project № 4714  
**Figure 4**

**Existing P.M. Peak Hour Traffic Volumes**



## PROJECTED CONDITIONS ANALYSIS

Traffic conditions were analyzed for the study roadways and intersections for operations with the completion and full occupancy in 2018. Projected traffic volumes consist of future background traffic combined with development-generated traffic (or trips). Future background traffic volumes were determined by applying an annual growth to the existing traffic volumes. A trends analysis of daily traffic volumes (AADTs) on Nebraska Avenue, 13<sup>th</sup> Street and 25<sup>th</sup> Street revealed annual growth rates ranging from -2.38 to +1.94%. The trends analysis charts are included in **Appendix C**. In the analysis a minimum annual growth of 2.0% was used to expand the existing traffic volumes to 2018.

### Roadway Segment Analysis

The study roadways were analyzed for the P.M. peak hour for project completion in 2018. The analysis is summarized in **Table 5**. The table shows to the number of lanes, adopted/LOS capacity, total traffic volumes (background traffic + project trips) and resultant Levels of Service by roadway segment. The results indicate satisfactory traffic operating conditions in 2018 with project trips added.

**Table 5  
Projected Roadway Capacity Analysis-Peak Hour**

Roadway Segment	No. of Lanes	Adopted		P.M. Peak Hour Volume			LOS
		LOS	Capacity	Background	Project	Total	
<b>North Lawnwood Circle</b>							
Nebraska Ave to Project Site	2	D	675	78	12	90	C
<b>South Lawnwood Circle</b>							
Nebraska Ave to Project Site	2	D	675	30	27	57	C
<b>Nebraska Avenue</b>							
25 <sup>th</sup> St to Lawnwood Cir	4	D	1,710	217	29	246	C
Lawnwood Cir to 13 <sup>th</sup> St	4	D	1,710	396	22	418	D
<b>13<sup>th</sup> Street</b>							
Virginia Ave to Nebraska Ave	2	D	710	396	17	413	D
Nebraska Ave to Georgia Ave	2	D	790	1,199	14	1,213	C
<b>25<sup>th</sup> Street</b>							
Virginia Ave to Nebraska Ave	4	D	2,000	1,199	27	1,226	C
Nebraska Ave to Okeechobee Rd	4	D	2,000	217	29	246	C



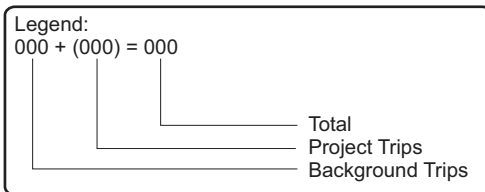
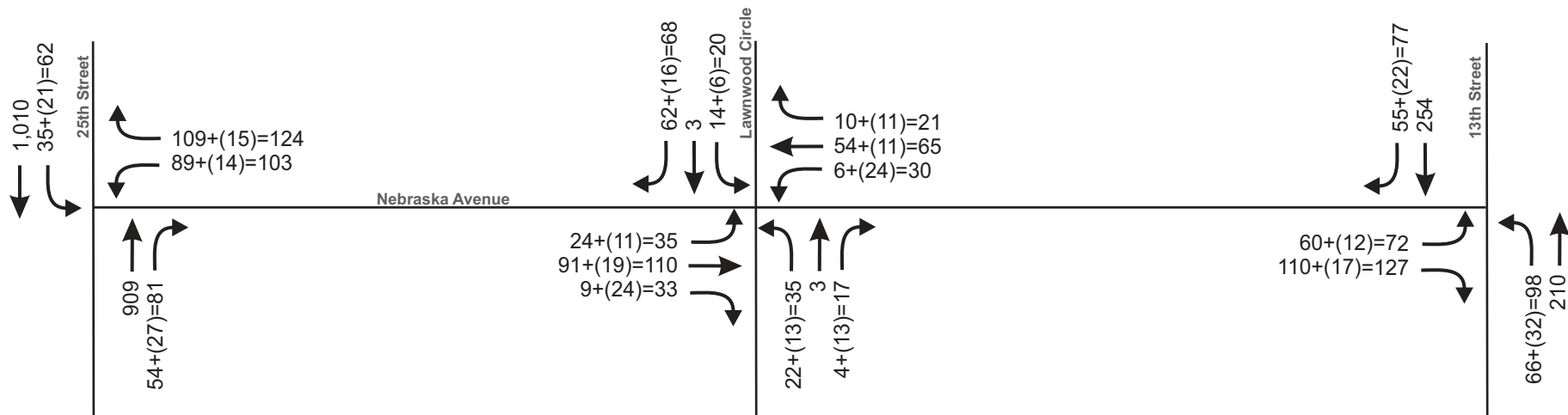
## Intersection Analysis

The analysis of projected conditions for the study intersections was accomplished similar to the existing conditions analysis utilizing the HCS software. The projected traffic volumes as shown in **Figures 5A and 5B** were used in conjunction with existing intersection geometry and traffic controls to perform a capacity analysis for total traffic with project trips. The results of the analysis are summarized in **Table 6**. These results indicate satisfactory traffic operating conditions in 2018 with the completion and full occupancy of the project. The HCS capacity sheets are included in **Appendix D**.

**Table 6**  
**Projected Intersection Capacity Analysis**

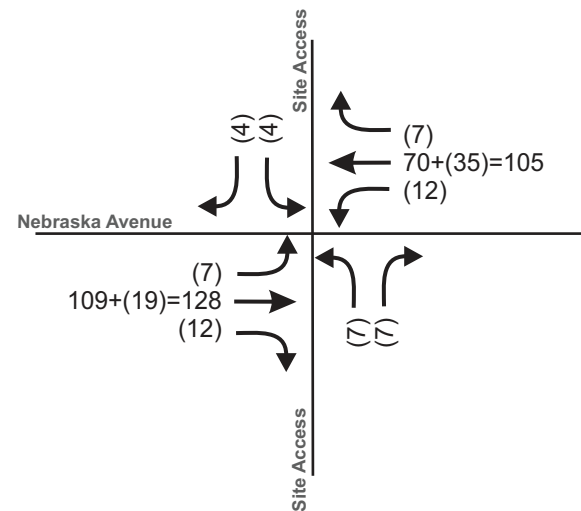
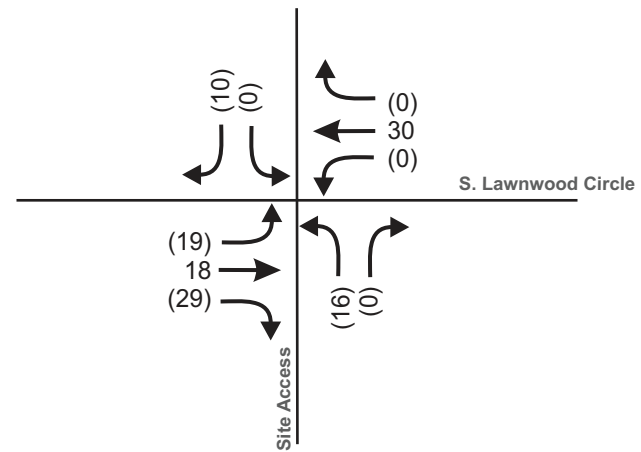
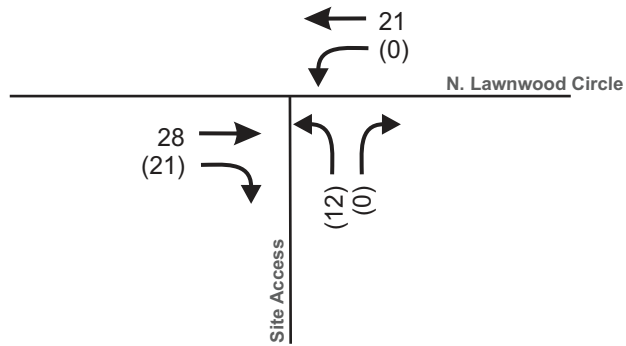
Intersection	Control	Period	EB		WB		NB		SB		Overall	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Nebraska Avenue & 25 <sup>th</sup> Street	STOP	P.M.	----	----	30.3	D	----	----	11.3	B	----	----
Nebraska Avenue & Lawnwood Avenue	STOP	P.M.	7.4	A	7.4	A	10.8	B	9.5	A	----	----
Nebraska Avenue & 13 <sup>th</sup> Street	Signal	P.M.	19.7	B	----	----	3.8	A	6.8	A	8.8	A
Site Access @ North Lawnwood Circle	STOP	P.M.	----	----	7.3	A	8.9	A	----	----	----	----
Site Access @ South Lawnwood Circle	STOP	P.M.	7.3	A	7.3	A	9.3	A	8.5	A	----	----
Site Access @ Nebraska Ave	STOP	P.M.	7.4	A	7.5	A	9.4	A	9.3	A	----	----





**Projected P.M. Peak Hour Traffic Volumes**





Legend:  
 000 + (000) = 000

Total  
 Project Trips  
 Background Trips

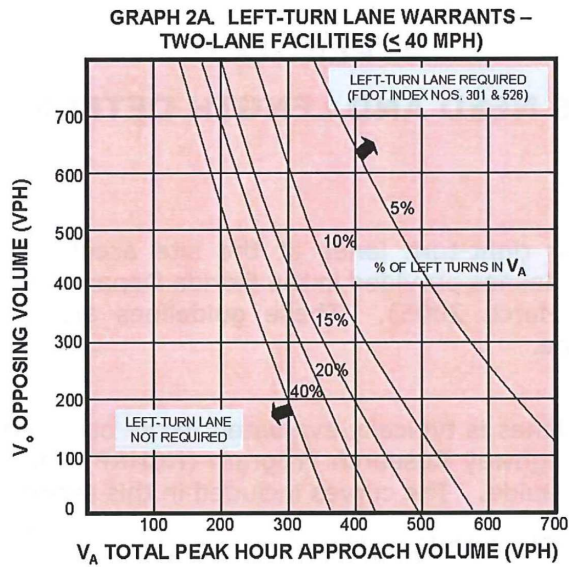


**Projected P.M. Peak Hour Traffic Volumes**

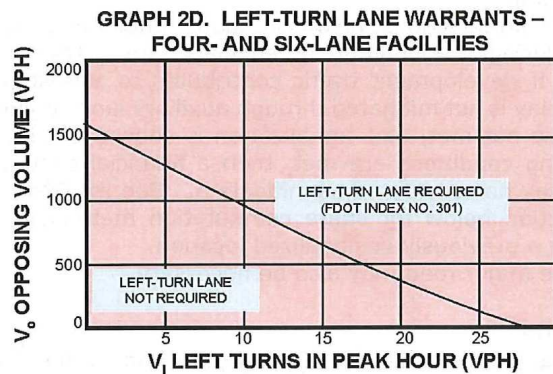


## TURN LANE ANALYSIS

The need for turn lanes into the project site was evaluated using the FDOT Driveway Handbook for right turn lanes and the NCHRP Report 279 for left turn lanes. As per the FDOT Driveway Handbook, the projected right turns at the project entrances do not meet the 125-vehicle trip threshold required for right turn lanes. As for the protected left turns at the site entrances, the NCHRP Report warrant requirements illustrated in the graphs below are not satisfied.



Note: Left-turn lane not required when intersection of  $V_A$  and  $V_O$  is below the curve corresponding to the % of left turns in  $V_A$ .



Note: When  $V_O < 400$  VPH, a left-turn lane is not normally warranted unless the advancing volume ( $V_A$ ) in the same direction as left-turning traffic exceeds 400 VPH. ( $V_A > 400$  VPH).



## CONCLUSIONS

This analysis was conducted to assess the traffic impact of a multi-family residential project in Fort Pierce, Florida. Located to the north and south of Nebraska Avenue in the Lawnwood area, the development will consist of 266 units. The results of the study as documented herein are summarized below:

- The proposed development will generate 1,769 daily trips and 165 P.M. peak hour trips.
- Based upon the St. Lucie guidelines, the development will significantly impact Lawnwood Circle and Nebraska Avenue.
- Lawnwood Circle (north and south) and Nebraska Avenue currently operate at satisfactory Levels of Service and will continue to do so in 2018 with the project completed and fully occupied.
- The study intersections impacted by the proposed development currently operate at satisfactory Levels of Service and will continue to do so with the completion of the project.
- The project access connections on Lawnwood Circle and Nebraska Avenue will adequately serve the trips of the proposed development.



## APPENDICES

## **APPENDIX A**

Turning Movement Counts  
Signal Timing Sheet

**15 MINUTE TURNING MOVEMENT COUNTS**

*(Cars and Trucks)*

DATE: November 9, 2015 (Monday)

CITY: Ft. Pierce

LATITUDE: 0

LOCATION: 13th St & Nebraska Av

COUNTY: St. Lucie

LONGITUDE: 0

**13th St**

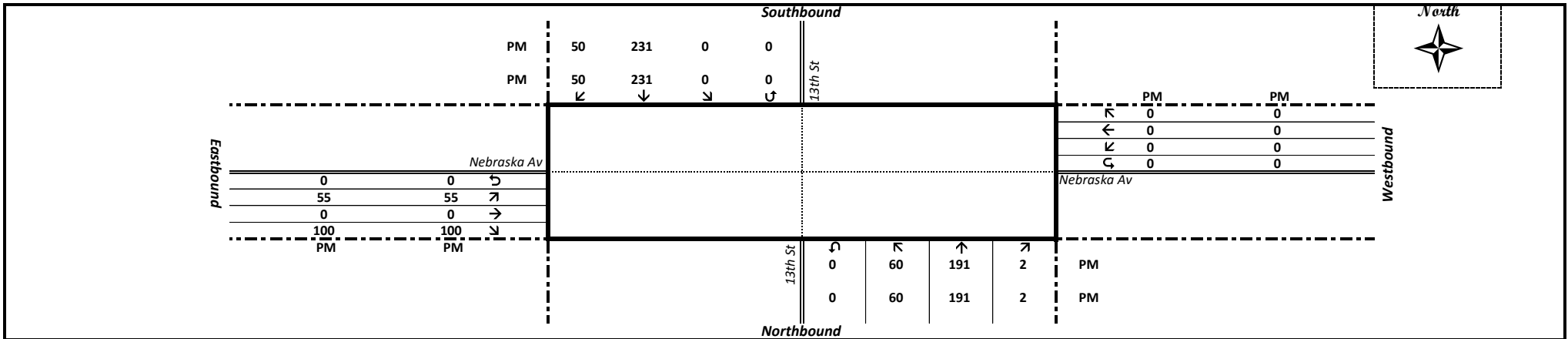
**13th St**

**Nebraska Av**

**Nebraska Av**

TIME BEGIN	NORTHBOUND					SOUTHBOUND					N/S TOTAL	EASTBOUND					WESTBOUND					E/W TOTAL	GRAND TOTAL
	L	T	R	U-turn	TOTAL	L	T	R	U-turn	TOTAL		L	T	R	U-turn	TOTAL	L	T	R	U-turn	TOTAL		
04:00 PM	7	35	0	0	42	0	40	6	0	46	88	19	0	25	0	44	0	0	0	0	0	44	132
04:15 PM	17	44	0	0	61	0	55	17	0	72	133	14	0	19	0	33	0	0	0	0	0	33	166
04:30 PM	9	35	0	0	44	0	53	11	0	64	108	15	0	19	0	34	0	0	0	0	0	34	142
04:45 PM	11	51	0	0	62	0	44	18	0	62	124	15	0	20	0	35	0	0	0	0	0	35	159
<b>TOTAL</b>	44	165	0	0	209	0	192	52	0	244	453	63	0	83	0	146	0	0	0	0	0	146	599
05:00 PM	18	35	1	0	54	0	57	12	0	69	123	19	0	33	0	52	0	0	0	0	0	52	175
05:15 PM	24	50	0	0	74	0	69	15	0	84	158	10	0	25	0	35	0	0	0	0	0	35	193
05:30 PM	7	50	1	0	58	0	44	11	0	55	113	18	0	15	0	33	0	0	0	0	0	33	146
05:45 PM	11	56	0	0	67	0	61	12	0	73	140	8	0	27	0	35	0	0	0	0	0	35	175
<b>TOTAL</b>	60	191	2	0	253	0	231	50	0	281	534	55	0	100	0	155	0	0	0	0	0	155	689

PM Peak		Peak Hour Factor: 0.892																						
05:00 PM to	06:00 PM	60	191	2	0	253	0	231	50	0	281	534	55	0	100	0	155	0	0	0	0	0	155	689



**15 MINUTE TURNING MOVEMENT COUNTS**

*(Trucks Only)*

DATE: November 9, 2015 (Monday)

CITY: Ft. Pierce

LATITUDE: 0

LOCATION: 13th St & Nebraska Av

COUNTY: St. Lucie

LONGITUDE: 0

**13th St**

**13th St**

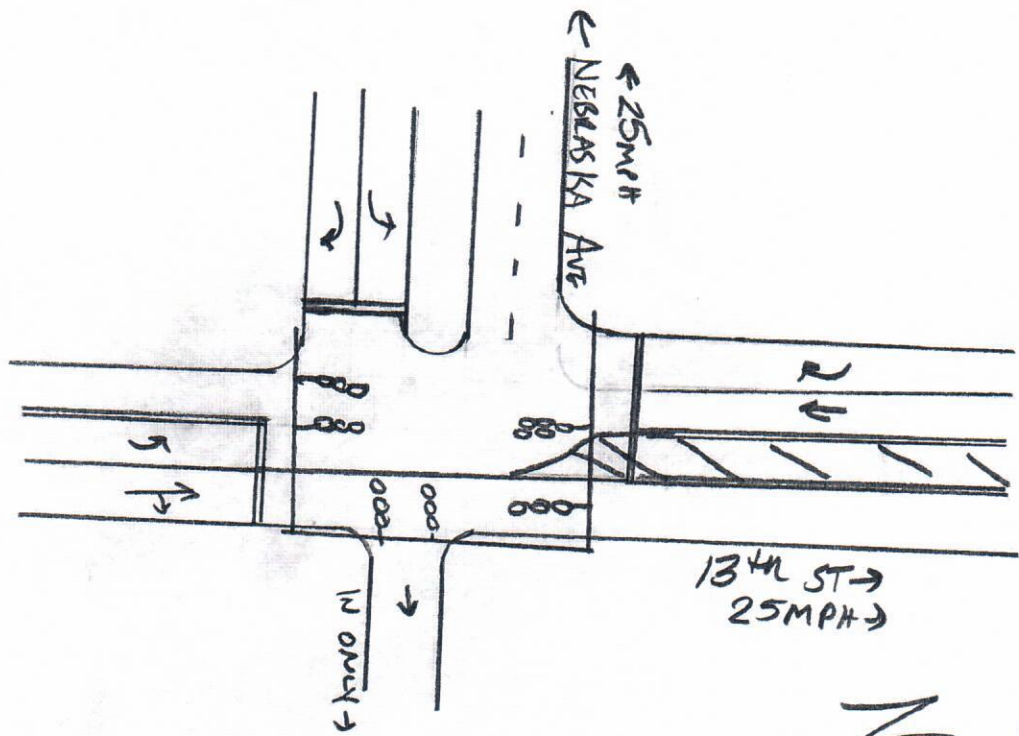
**Nebraska Av**

**Nebraska Av**

TIME BEGIN	NORTHBOUND					SOUTHBOUND					N/S TOTAL	EASTBOUND					WESTBOUND					E/W TOTAL	GRAND TOTAL
	L	T	R	U-turn	TOTAL	L	T	R	U-turn	TOTAL		L	T	R	U-turn	TOTAL	L	T	R	U-turn	TOTAL		
04:00 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	1	3	0	0	4	0	2	0	0	2	6	0	0	0	0	0	0	0	0	0	0	0	6
04:30 PM	0	1	0	0	1	0	2	0	0	2	3	0	0	2	0	2	0	0	0	0	0	2	5
04:45 PM	0	1	0	0	1	0	2	0	0	2	3	1	0	0	0	1	0	0	0	0	0	1	4
<b>TOTAL</b>	1	5	0	0	6	0	7	0	0	7	13	1	0	2	0	3	0	0	0	0	0	3	16
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	1	2
<b>TOTAL</b>	0	0	0	0	0	0	2	0	0	2	2	0	0	1	0	1	0	0	0	0	0	1	3

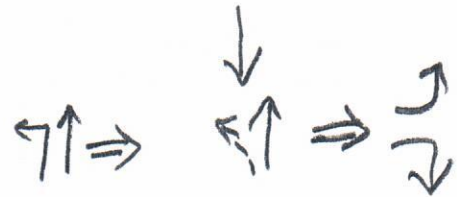
**PM Peak**

05:00 PM to 06:00 PM	0	0	0	0	0	0	2	0	0	2	2	0	0	1	0	1	0	0	0	0	0	1	3
----------------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---



Name : Nebraska Ave & 13th ST

	AM Time (Sec)			
Cycle	55	54	55	55
NB LT	6	7	6	6
NB LT & TI	24	24	25	25
SB Th	24	24	25	25
EB LT & Ri	14	15	15	15



**APPENDIX B**

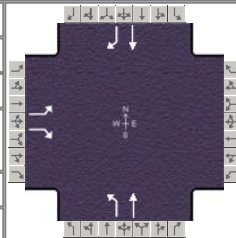
Existing HCS Capacity Worksheets

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	DWF			Intersection	25th St & Nebraska Ave			
Agency/Co.	TPD			Jurisdiction	Ft Pierce			
Date Performed	11/16/2015			Analysis Year	2015			
Analysis Time Period	PM Peak (Existing)							
Project Description								
East/West Street: Nebraska Ave				North/South Street: 25th Street				
Intersection Orientation: North-South				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		858	51	33	953			
Peak-Hour Factor, PHF	1.00	0.90	0.90	0.90	0.90	1.00		
Hourly Flow Rate, HFR (veh/h)	0	953	56	36	1058	0		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Two Way Left Turn Lane							
RT Channelized			0			0		
Lanes	0	2	0	1	2	0		
Configuration		T	TR	L	T			
Upstream Signal		0			0			
Minor Street	Eastbound			Westbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				84		103		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	1.00	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0	93	0	114		
Percent Heavy Vehicles	0	0	0	1	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	1	0	1		
Configuration				L		R		
Delay, Queue Length, and Level of Service								
Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	L		R			
v (veh/h)		36	93		114			
C (m) (veh/h)		695	219		572			
v/c		0.05	0.42		0.20			
95% queue length		0.16	1.97		0.74			
Control Delay (s/veh)		10.5	33.1		12.9			
LOS		B	D		B			
Approach Delay (s/veh)	--	--	21.9					
Approach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	DWF			Intersection	Nebraska Ave & Lawnwood Circle			
Agency/Co.	TPD			Jurisdiction	Fort Pierce			
Date Performed	11/16/2015			Analysis Year	2015			
Analysis Time Period	PM Peak (Existing)							
Project Description								
East/West Street: <i>Nebraska Avenue</i>				North/South Street: <i>Lawnwood Circle</i>				
Intersection Orientation: <i>East-West</i>				Study Period (hrs): <i>0.25</i>				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	23	86	8	6	51	9		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	24	93	8	6	55	9		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Raised curb							
RT Channelized			0				0	
Lanes	1	2	0	1	2		0	
Configuration	L	T	TR	L	T		TR	
Upstream Signal		0			0			
<b>Minor Street</b>	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	21	3	4	13	3	58		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	22	3	4	14	3	63		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0				0	
Lanes	0	1	0	0	1		0	
Configuration		LTR			LTR			
<b>Delay, Queue Length, and Level of Service</b>								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	LTR			LTR		
v (veh/h)	24	6	29			80		
C (m) (veh/h)	1551	1504	738			964		
v/c	0.02	0.00	0.04			0.08		
95% queue length	0.05	0.01	0.12			0.27		
Control Delay (s/veh)	7.4	7.4	10.1			9.1		
LOS	A	A	B			A		
Approach Delay (s/veh)	--	--	10.1			9.1		
Approach LOS	--	--	B			A		

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TPD			Duration, h	0.25
Analyst	DWF	Analysis Date	Nov 16, 2015	Area Type	Other
Jurisdiction	Fort Pierce	Time Period	PM Peak (Existing)	PHF	0.89
Intersection	13th Street & Nebraska Ave	Analysis Year	2015	Analysis Period	1 > 17:00
File Name	13th Street & Nebraska Avenue Existing PM Peak.xus				
Project Description	PM Peak (Existing)				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	57		104				62	199			240	52

Signal Information													
Cycle, s	54.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	3.0	29.0	10.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.0	3.0	3.0	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		9.0			1.0	4.0		7.3
Phase Duration, s		14.0			7.0	40.0		33.0
Change Period, (Y+R <sub>c</sub> ), s		4.0			4.0	4.0		4.0
Max Allow Headway (MAH), s		3.4			4.3	4.2		4.2
Queue Clearance Time (g <sub>s</sub> ), s		5.5			2.8	4.4		6.2
Green Extension Time (g <sub>e</sub> ), s		0.1			0.0	1.9		2.1
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.35			1.00	0.01		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate (v), veh/h	64		117				70	224			270	58
Adjusted Saturation Flow Rate (s), veh/h/ln	1810		1594				1810	1900			1881	1610
Queue Service Time (g <sub>s</sub> ), s	1.6		3.5				0.8	2.4			4.2	0.9
Cycle Queue Clearance Time (g <sub>c</sub> ), s	1.6		3.5				0.8	2.4			4.2	0.9
Green Ratio (g/C)	0.19		0.19				0.63	0.67			0.54	0.54
Capacity (c), veh/h	335		295				752	1267			1010	865
Volume-to-Capacity Ratio (X)	0.191		0.396				0.093	0.177			0.267	0.068
Available Capacity (c <sub>a</sub> ), veh/h	335		295				752	1267			1010	865
Back of Queue (Q), veh/ln (95th percentile)	1.2		2.2				0.4	1.1			2.5	0.5
Queue Storage Ratio (RQ) (95th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay (d <sub>1</sub> ), s/veh	18.6		19.3				4.2	3.4			6.8	6.0
Incremental Delay (d <sub>2</sub> ), s/veh	0.1		0.3				0.1	0.1			0.1	0.0
Initial Queue Delay (d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay (d), s/veh	18.7		19.7				4.3	3.5			6.9	6.0
Level of Service (LOS)	B		B				A	A			A	A
Approach Delay, s/veh / LOS	19.3		B	0.0			3.7	A		6.7		A
Intersection Delay, s/veh / LOS	8.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	0.6	A	2.2	B
Bicycle LOS Score / LOS		F			1.0	A	1.0	A

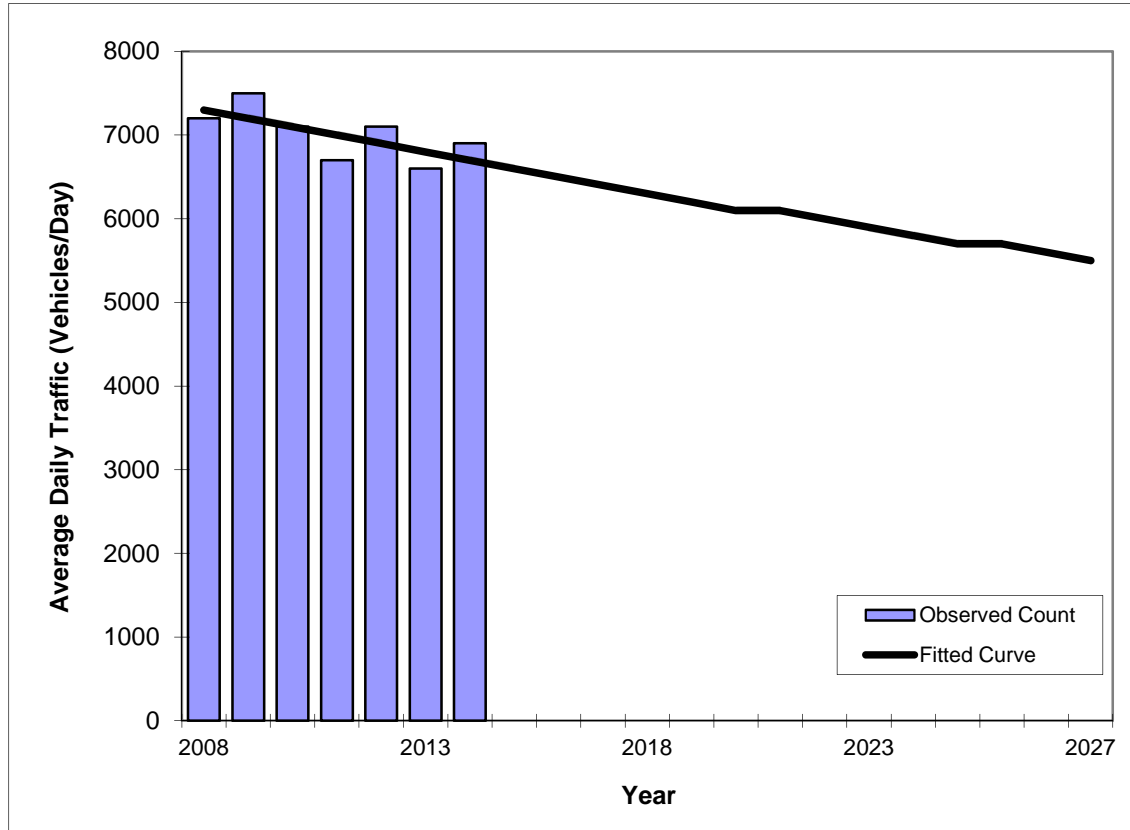
## **APPENDIX C**

### Trends Analysis Charts

## TRAFFIC TRENDS

13th St -- Virginia Ave to Georgia Ave

<b>County:</b>	0
<b>Station #:</b>	0
<b>Highway:</b>	13th St



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2008	7200	7300
2009	7500	7200
2010	7100	7100
2011	6700	7000
2012	7100	6900
2013	6600	6800
2014	6900	6700
<b>2015 Opening Year Trend</b>		
2015	N/A	6600
<b>2016 Mid-Year Trend</b>		
2016	N/A	6500
<b>2020 Design Year Trend</b>		
2020	N/A	6100
<b>TRANPLAN Forecasts/Trends</b>		

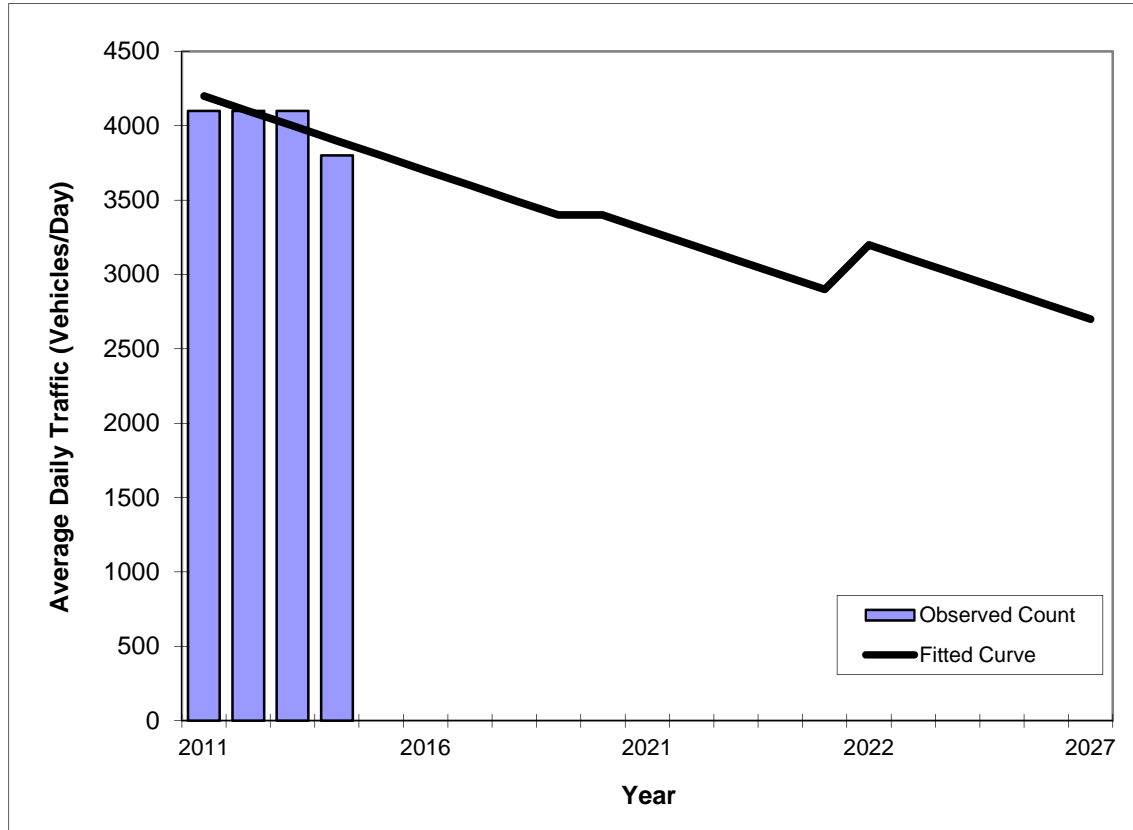
<b>** Annual Trend Increase:</b>	-96
<b>Trend R-squared:</b>	45.8%
<b>Trend Annual Historic Growth Rate:</b>	-1.37%
<b>Trend Growth Rate (2014 to Design Year):</b>	-1.49%
<b>Printed:</b>	17-Nov-15
<b>Straight Line Growth Option</b>	

\*Axle-Adjusted

## TRAFFIC TRENDS

Nebraska Ave -- 25th St to 13th St

<b>County:</b>	0
<b>Station #:</b>	0
<b>Highway:</b>	Nebraska Ave



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2011	4100	4200
2012	4100	4100
2013	4100	4000
2014	3800	3900
<b>2015 Opening Year Trend</b>		
2015	N/A	3800
<b>2016 Mid-Year Trend</b>		
2016	N/A	3700
<b>2020 Design Year Trend</b>		
2020	N/A	3400
<b>TRANPLAN Forecasts/Trends</b>		

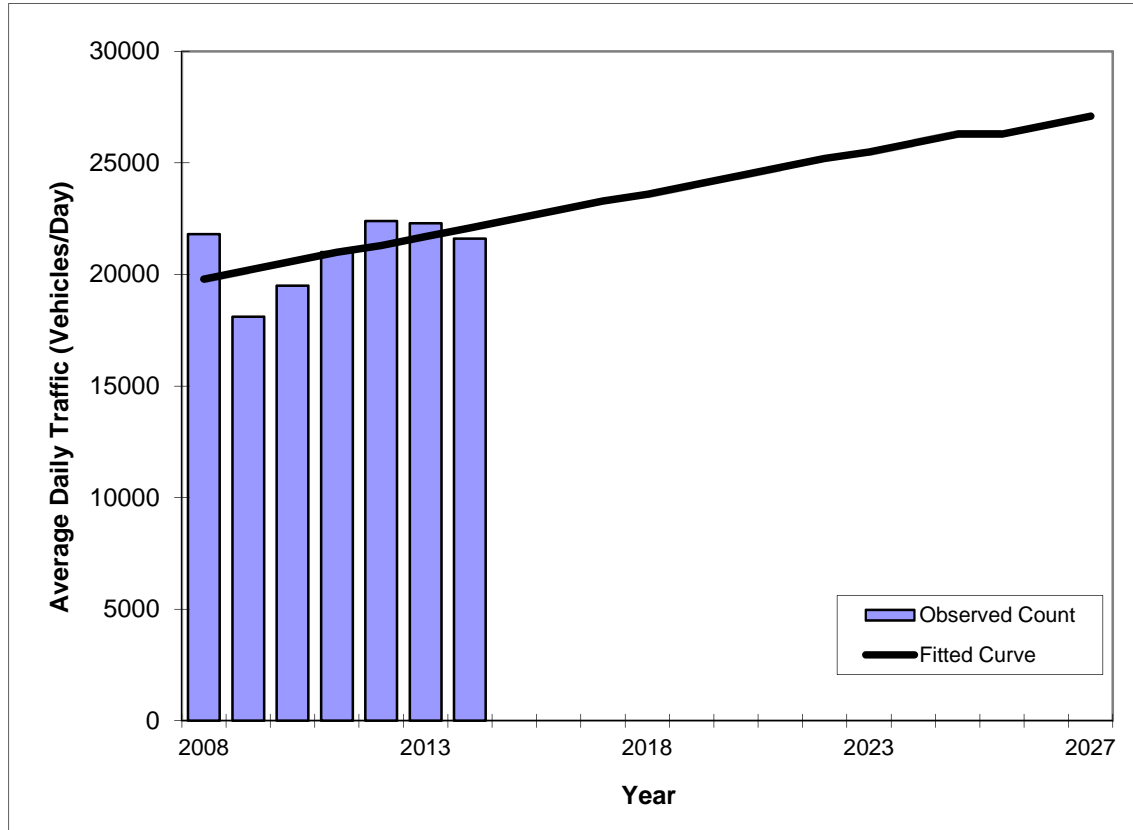
<b>** Annual Trend Increase:</b>	-90
<b>Trend R-squared:</b>	60.0%
<b>Trend Annual Historic Growth Rate:</b>	-2.38%
<b>Trend Growth Rate (2014 to Design Year):</b>	-2.14%
<b>Printed:</b>	17-Nov-15
<b>Straight Line Growth Option</b>	

\*Axle-Adjusted

## TRAFFIC TRENDS

25th St -- Virginia Ave to Okeechobee Rd

<b>County:</b>	0
<b>Station #:</b>	0
<b>Highway:</b>	25th St



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2008	21800	19800
2009	18100	20200
2010	19500	20600
2011	21000	21000
2012	22400	21300
2013	22300	21700
2014	21600	22100
<b>2015 Opening Year Trend</b>		
2015	N/A	22500
<b>2016 Mid-Year Trend</b>		
2016	N/A	22900
<b>2020 Design Year Trend</b>		
2020	N/A	24400
<b>TRANPLAN Forecasts/Trends</b>		

** Annual Trend Increase:	382
Trend R-squared:	26.7%
Trend Annual Historic Growth Rate:	1.94%
Trend Growth Rate (2014 to Design Year):	1.73%
Printed:	17-Nov-15

**Straight Line Growth Option**

\*Axle-Adjusted

**APPENDIX D**

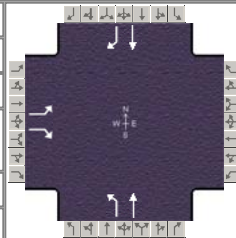
Projected HCS Capacity Worksheets

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	DWF			Intersection	25th St & Nebraska Ave		
Agency/Co.	TPD			Jurisdiction	Ft Pierce		
Date Performed	11/16/2015			Analysis Year	2015		
Analysis Time Period	PM Peak (Existing)						
Project Description							
East/West Street: Nebraska Ave				North/South Street: 25th Street			
Intersection Orientation: North-South				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Northbound			Southbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		909	81	62	1010		
Peak-Hour Factor, PHF	1.00	0.90	0.90	0.90	0.90	1.00	
Hourly Flow Rate, HFR (veh/h)	0	1010	90	68	1122	0	
Percent Heavy Vehicles	0	--	--	0	--	--	
Median Type	Two Way Left Turn Lane						
RT Channelized			0			0	
Lanes	0	2	0	1	2	0	
Configuration		T	TR	L	T		
Upstream Signal		0			0		
Minor Street	Eastbound			Westbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)				103		124	
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.90	1.00	0.90	
Hourly Flow Rate, HFR (veh/h)	0	0	0	114	0	137	
Percent Heavy Vehicles	0	0	0	1	0	0	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	1	0	1	
Configuration				L		R	
Delay, Queue Length, and Level of Service							
Approach	Northbound	Southbound	Westbound			Eastbound	
Movement	1	4	7	8	9	10	11
Lane Configuration		L	L		R		
v (veh/h)		68	114		137		
C (m) (veh/h)		642	188		539		
v/c		0.11	0.61		0.25		
95% queue length		0.35	3.38		1.00		
Control Delay (s/veh)		11.3	49.9		13.9		
LOS		B	E		B		
Approach Delay (s/veh)	--	--	30.3				
Approach LOS	--	--	D				

TWO-WAY STOP CONTROL SUMMARY								
<b>General Information</b>				<b>Site Information</b>				
Analyst	DWF			Intersection	Nebraska Ave & Lawnwood Circle			
Agency/Co.	TPD			Jurisdiction	Fort Pierce			
Date Performed	11/16/2015			Analysis Year	2015			
Analysis Time Period	PM Peak (Projected)							
Project Description								
East/West Street: Nebraska Avenue				North/South Street: Lawnwood Circle				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	35	110	33	30	65	21		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	38	119	35	32	70	22		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Raised curb							
RT Channelized			0				0	
Lanes	1	2	0	1	2		0	
Configuration	L	T	TR	L	T		TR	
Upstream Signal		0			0			
<b>Minor Street</b>	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	35	3	17	20	3	68		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	38	3	18	21	3	73		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0				0	
Lanes	0	1	0	0	1		0	
Configuration		LTR			LTR			
<b>Delay, Queue Length, and Level of Service</b>								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (veh/h)	38	32		59			97	
C (m) (veh/h)	1515	1439		683			893	
v/c	0.03	0.02		0.09			0.11	
95% queue length	0.08	0.07		0.28			0.36	
Control Delay (s/veh)	7.4	7.6		10.8			9.5	
LOS	A	A		B			A	
Approach Delay (s/veh)	--	--		10.8			9.5	
Approach LOS	--	--		B			A	

# HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	TPD			Duration, h	0.25
Analyst	DWF	Analysis Date	Nov 16, 2015	Area Type	Other
Jurisdiction	Fort Pierce	Time Period	PM Peak (Projected)	PHF	0.89
Intersection	13th Street & Nebraska Ave	Analysis Year	2017	Analysis Period	1 > 17:00
File Name	13th Street & Nebraska Avenue Projected PM Peak.xus				
Project Description	PM Peak (Projected)				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	72		127				98	210			254	77

Signal Information													
Cycle, s	54.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	3.0	29.0	10.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.0	3.0	3.0	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		9.0			1.0	4.0		7.3
Phase Duration, s		14.0			7.0	40.0		33.0
Change Period, (Y+R <sub>c</sub> ), s		4.0			4.0	4.0		4.0
Max Allow Headway (MAH), s		3.4			4.3	4.2		4.2
Queue Clearance Time (g <sub>s</sub> ), s		6.3			3.3	4.6		6.5
Green Extension Time (g <sub>e</sub> ), s		0.2			0.0	2.1		2.3
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.80			1.00	0.02		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate (v), veh/h	81		143				110	236			285	87
Adjusted Saturation Flow Rate (s), veh/h/ln	1810		1594				1810	1900			1881	1610
Queue Service Time (g <sub>s</sub> ), s	2.1		4.3				1.3	2.6			4.5	1.4
Cycle Queue Clearance Time (g <sub>c</sub> ), s	2.1		4.3				1.3	2.6			4.5	1.4
Green Ratio (g/C)	0.19		0.19				0.63	0.67			0.54	0.54
Capacity (c), veh/h	335		295				738	1267			1010	865
Volume-to-Capacity Ratio (X)	0.241		0.483				0.149	0.186			0.282	0.100
Available Capacity (c <sub>a</sub> ), veh/h	335		295				738	1267			1010	865
Back of Queue (Q), veh/ln (95th percentile)	1.5		2.8				0.6	1.2			2.7	0.7
Queue Storage Ratio (RQ) (95th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay (d <sub>1</sub> ), s/veh	18.8		19.7				4.4	3.4			6.8	6.1
Incremental Delay (d <sub>2</sub> ), s/veh	0.1		0.5				0.1	0.1			0.2	0.0
Initial Queue Delay (d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay (d), s/veh	18.9		20.1				4.5	3.5			7.0	6.2
Level of Service (LOS)	B		C				A	A			A	A
Approach Delay, s/veh / LOS	19.7		B	0.0			3.8	A		6.8		A
Intersection Delay, s/veh / LOS	8.8						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	0.6	A	2.2	B
Bicycle LOS Score / LOS		F			1.1	A	1.1	A

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	DWF			Intersection	N Lawnwood & Site Access			
Agency/Co.	TPD			Jurisdiction	Fort Pierce			
Date Performed	11/16/2015			Analysis Year	2017			
Analysis Time Period	PM Peak (Projected)							
Project Description								
East/West Street: N Lawnwood Circle				North/South Street: Site Access				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		28	21	0	21			
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00		
Hourly Flow Rate, HFR (veh/h)	0	30	22	0	22	0		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration			TR	LT				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	12		0					
Peak-Hour Factor, PHF	0.92	1.00	0.92	1.00	1.00	1.00		
Hourly Flow Rate, HFR (veh/h)	13	0	0	0	0	0		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)		0			0			
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		0		13				
C (m) (veh/h)		1567		948				
v/c		0.00		0.01				
95% queue length		0.00		0.04				
Control Delay (s/veh)		7.3		8.9				
LOS		A		A				
Approach Delay (s/veh)	--	--		8.9				
Approach LOS	--	--		A				

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	DWF			Intersection	S Lawnwood & Site Access			
Agency/Co.	TPD			Jurisdiction	Fort Pierce			
Date Performed	11/16/2015			Analysis Year	2017			
Analysis Time Period	PM Peak (Projected)							
Project Description								
East/West Street: S. Lawnwood Circle				North/South Street: Site Access				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	19	18	29	0	30	0		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	20	19	31	0	32	0		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LTR			LTR				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	16	0	0	0	0	10		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	17	0	0	0	0	10		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR	LTR			LTR		
v (veh/h)	20	0	17			10		
C (m) (veh/h)	1593	1570	855			1048		
v/c	0.01	0.00	0.02			0.01		
95% queue length	0.04	0.00	0.06			0.03		
Control Delay (s/veh)	7.3	7.3	9.3			8.5		
LOS	A	A	A			A		
Approach Delay (s/veh)	--	--	9.3			8.5		
Approach LOS	--	--	A			A		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	DWF			Intersection	Nebraska Ave & Site Access			
Agency/Co.	TPD			Jurisdiction	Fort Pierce			
Date Performed	11/16/2015			Analysis Year	2017			
Analysis Time Period	PM Peak (Projected)							
Project Description								
East/West Street: Nebraska Avenue				North/South Street: Site Access				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	7	128	12	12	105	7		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	7	139	13	13	114	7		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Raised curb							
RT Channelized			0			0		
Lanes	1	2	0	1	2	0		
Configuration	L	T	TR	L	T	TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	7	0	7	4	0	4		
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly Flow Rate, HFR (veh/h)	7	0	7	4	0	4		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration		LTR			LTR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	LTR			LTR		
v (veh/h)	7	13	14			8		
C (m) (veh/h)	1479	1441	824			838		
v/c	0.00	0.01	0.02			0.01		
95% queue length	0.01	0.03	0.05			0.03		
Control Delay (s/veh)	7.4	7.5	9.4			9.3		
LOS	A	A	A			A		
Approach Delay (s/veh)	--	--	9.4			9.3		
Approach LOS	--	--	A			A		